

**AMENDMENTS TO THE DRAWINGS:**

On pages 2-5 of the Office Action, the Examiner objected to the drawings. To overcome these objections, replacement figures were submitted on June 13, 2005.

In response to the objections under 37 CFR § 1.83(a) on pages 2 and 3 of the March 10, 2005 Office Action, FIG. 2 has been amended to show error correction.

As required on page 4, FIG. 3 has been amended to conform to paragraph [0029] and FIG. 4 has been amended to use the English translation of "Störung."

In addition to the replacement sheets, copies of original FIGS. 2-4 were also attached to the Amendment filed June 13, 2005, showing the changes made in red ink. Approval of these changes to the drawings is respectfully requested.

**REMARKS**

In the March 10, 2005 Office Action, the Examiner noted that claims 16-30 were pending in the application; allowed claims 16-26 and 29; objected to the drawings under 37 CFR § 1.83(a); objected to the specification and claims apparently because the Examiner had difficulty reading the application and to correct specified errors in paragraphs [0013], [0024], [0026], [0034] and [0042], and in Figs. 3 and 4; and rejected claims 27, 28 and 30 under the first paragraph of 35 USC § 112. Claim 28 has been canceled and thus, claims 1-27, 29 and 30 remain in the case. The Examiner's objections and rejections are traversed below.

**Drawings**

On pages 2 and 3 of the Office Action, the Examiner objected to the drawings under 37 CFR § 1.83(a) as failing to disclose two methods of 14 and 17 lines each. No explanation was provided of specifically what in the methods was not shown in the drawings. It is unclear whether the Examiner wants a flowchart of each method, or believes that nothing in what was described in these paragraphs is illustrated in the drawings. Furthermore, the Office Action did not identify what claims were not illustrated in the drawings, since no claim numbers were associated with the text on pages 2 and 3 of the Office Action. As a result, it was unclear on the face of the Office Action why the Examiner objected to the drawings under 37 CFR § 1.83(a).

Furthermore, almost everything described on pages 2 and 3 of the Office Action was illustrated in the drawings filed with the application. The disturbance model illustrated in Fig. 1 "shows, in detail form, a number of subcarriers  $st_{i-1}$ ,  $st_i$ ,  $st_{i+1}$  in a multicarrier signal  $ms$ " (paragraph [0021], line 3), as well as "subcarrier-specific disturbances  $icix$ " (paragraph [0021], line 6). Thus, most of what is described on the first six lines of the paragraphs beginning with "a)" and "b)" on pages 2 and 3 of the Office Action is illustrated in Fig. 1.

As noted in paragraph [0020], "Figure 2 is block diagram of the circuit using the method according to the invention" and "Figure 3 is a block diagram of ... additive superimposition of reference disturbance information, and test disturbances derived from it, on the respective subcarriers in a received multicarrier signal". As described in paragraph [0028], disturbance units STE in Fig. 2 "superimpose reference disturbance information ... also referred to as defined test disturbances" (lines 2-5) and thus, the "superimposing" operation described at page 2, lines 13-15 of the Office Action is illustrated in Fig. 2.

As described in paragraph [0031], the error detection units FE compare symbols resulting from the superimposed disturbances with "modulation symbols ... in each case

dependent on the modulation method used" (lines 2-3) to produce "subcarrier-specific error information" (lines 3-4). Thus, the operation "comparing" described at lines 15-18 on page 2 of the Office Action is illustrated in Fig. 2.

As described in paragraph [0032], "correction information ... is derived ... from ... predetermined reference disturbance information ... and ... disturbance-information-specific ... error information" (lines 1-4). Thus, the "deriving" operation described at lines 18-20 on page 2 of the Office Action is illustrated in Fig. 2.

As described in paragraph [0036] "correction information ... is passed on to the correction unit KE" (line 1) and applied to "the received symbols" (line 2) which as described previously in the specification correspond to the frequency-discrete subcarriers. Thus, the "correcting" operation described at lines 20-21 of page 2 in the Office Action is illustrated in Fig. 2.

The method described on page 3 of the Office Action includes superimposing, comparing, deriving and correcting operations at lines 10-17 that are very similar to those described on page 2 and for the reasons set forth above, these operations are believed to be illustrated in Fig. 2. In addition, the method described on page 3 of the Office Action includes "demodulating the multi-carrier signal to produce a demodulated multicarrier signal" (lines 6-7) and "identifying and correcting errors in the demodulated multicarrier signal using an error handling routine" (lines 7-8). As described in paragraph [0024], demodulator DMOD produces a "demodulated received signal ... as a digital data signal di" (last two lines). Thus, the operation described on lines 6-7 of the Office Action is illustrated in Fig. 2.

Paragraph [0039] of the application acknowledged that the error handling routine was not illustrated in the drawings. Therefore, a block labeled FEC has been added to Fig. 2 to provide an illustration of what was described in original paragraph [0039]. It is submitted that one of ordinary skill in the art would have had no difficulty add such a block to Fig. 2. to match the description provided in paragraph [0039]. Therefore, it is submitted that no "new matter" has been added by the change made to Fig. 2.

On page 4 of the Office Action, additional objections were made to Figs. 3 and 4. Figs. 3 and 4 have been amended as required in these objections.

For the reasons set forth above, withdrawal of the objections to the drawings is respectfully requested.

### **Objections to Specification**

On pages 5 and 6 of the Office Action, the Examiner objected to the specification for six enumerated reasons and "[n]ew application papers with lines double spaced" were required. No basis was provided for the latter requirement which exceeds the requirement of 37 CFR § 1.52(b)(2)(i) which only requires "[l]ines that are 1½ or double-spaced." Since the Substitute Specification submitted on October 1, 2001 met the requirements set forth in 37 CFR § 1.52, it is not understood why the Examiner is requiring more. However, since this requirement has been made, a new Substitute Specification was submitted with the Amendment filed June 13, 2005 using double spaced lines, instead of the 1½ line spacing that was used in the Substitute Specification filed October 1, 2001.

The Substitute Specification was submitted with the Amendment filed June 13, 2005 included the six changes listed on pages 5 and 6 of the Office Action. For the above reasons, withdrawal of the objections to the specification is respectfully requested.

### **Rejections under 35 USC § 112, First Paragraph**

On page 7 of the Office Action, claims 27 and 28 were rejected under the first paragraph of 35 USC 112 for "failing to comply with the written description requirement." Claim 28 has been canceled and therefore only claim 27 will be addressed below.

Claim 27 was rejected for failure of the Examiner to find a description in the specification of "the case of the transmission medium is a cable-based transmission channel and a wire-based transmission channel." The Examiner's attention is directed to paragraph [0002] which described "wire-based connecting cables" (line 9). Based on this description in the application as filed, paragraph [0043] has been added to describe that the invention can be applied to this known transmission medium. It is submitted that no "new matter" is contained in paragraph [0043] since it was clear from paragraph [0002] and original claim 27 that application of the invention to cable- and wire-based transmission mediums was contemplated by the inventors. Therefore, withdrawal of the rejection of claim 27 is respectfully requested.

On pages 7 and 8 of the Office Action, claim 30 was rejected under the first paragraph of 35 USC § 112 for lack of enablement regarding the means for comparing, deriving and correcting recited at the last eight lines of claim 8. As noted above in the description of how Fig. 2 shows the operation described on pages 2 and 3 of the Office Action, all three of the functions recited on the last eight lines of claim 30 are illustrated in Fig. 2 and described in paragraphs

[0031], [0032] and [0036]. Therefore, it is submitted claim 30 meets the requirements of 35 USC § 112, first paragraph.

### Summary

It is submitted that the amended specification and drawings meet all of the requirements in 37 CFR §§ 1.52 and 1.83(a) and that claims 27 and 30 meet the requirements of 35 USC § 112, first paragraph. Therefore, it is submitted that the application is in condition for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 10/19/05

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**CERTIFICATE UNDER 37 CFR 1.8(a)**  
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 10/19/2005  
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